

TLH-581R

AWS A5.1 E7018-1 H4R
EN499 E46 4 B 32 H5

Characteristics and Applications:

TLH-581R is an iron powder low hydrogen type electrode for all-positioned welding of 490N/mm² grade high tensile steel. The welding can be done with high deposition rate, good X-ray soundness, good mechanical properties, excellent moisture absorbency resistance and beautiful bead. Because of excellent notch toughness at the temperature of -45°C, it is very suitable for low alloy structure, medium carbon steels, barge offshore rigs and shipbuilding.

Notes on Usage:

1. Take the backstep method to prevent blowholes at the arc starting.
2. Keep the arc as short as possible.
3. Be sure to clean up the base metal surface from all contamination.
4. If electrode has been exposed to the atmosphere over 8 hours, it must be rebaked at 400°C for one hour.

Typical chemical composition of weld metal (wt%)

C	Mn	Si	P	S
0.060	1.20	0.45	0.02	0.005

Typical mechanical properties of weld metal

YS N/mm ²	TS N/mm ²	EL %	CVN -45°C J
500	580	33	90

Welding position



Sizes and recommended current range (AC or DC <+>)

Diameter (mm)	2.6	3.2	4.0	5.0	
Length (mm)	350	350	450	450	
		450			
Amps	F	95-110	120-140	160-200	200-280
	V&OH	95-110	110-130	130-160	---

Typical absorbed moisture (at 27°C/80%RH condition)

0hr	9hrs	24hrs
0.13%	0.13%	0.17%

Typical diffusible hydrogen(at 27°C/80%RH condition)

0hr(ml/100g)	4hrs(ml/100g)
3.27	3.43

* The information contained or otherwise referenced herein is presented only as "typical" without guarantee or warranty, and Tien Tai Electrode Co., Ltd. expressly disclaims any liability incurred from any reliance thereon. Typical data is obtained when welded and tested in accordance with AWS specification. Other tests and procedures may produce different results. No data is to be construed as recommendation for any welding condition or technique not controlled by Tien Tai Electrode Co., Ltd.